

## REMARKS

The undersigned thanks Examiner Ackun for the courtesy of the telephone interview held on July 16, 2003.

The Examiner is hereby advised that the Attorneys of Record have changed. A Revocation and Power of Attorney will be submitted in due course. The Examiner is kindly asked to direct any questions to the undersigned at the phone number given below, and mail all future correspondence to the address given below.

In the Office Action mailed April 4, 2003, the Examiner maintained the rejection of claims 2-7 and 9-34 as being unpatentable over USP 4,509,886 to Lindsay, substantially for the same reasons as those stated in the office action mailed October 18, 2002. The rejection of claims 2-7 and 9-34 is traversed, and the Examiner is kindly asked to reconsider the rejection in view of the remarks below.

### **Examiner's Rejection of the Claims**

On page 2 of the final office action, the Examiner conceded that Lindsay does not teach at least the following features:

- (1) The protrusion being on the insert with the corresponding recess being on the insert holder;
- (2) The recess extending in the longitudinal direction; and
- (3) The clamping abutment surfaces of the insert being sloped.

However, the Examiner argues that “it would have been obvious to provide the invention of Lindsay with the missing features for the purpose of more securely retaining the cutting insert, to allow for easier insertion and removal of the insert, for design or aesthetic reasons, or depending on the particular application/insert desired. Reversing the surfaces on which a protrusion and recess are placed would not appear to be novel or unobvious, for example.” (Emphasis added).

Applicant submits that (a) there is no motivation in the cited prior art to do any such ‘reversing’; (b) Lindsay teaches away from any such ‘reversing’, and (c) even if such ‘reversing’ were performed, one still would not arrive at the invention of all of the pending claims. Accordingly, the Examiner’s rejection is traversed and it is requested that the rejection of record be withdrawn.

#### **Examiner’s Rejection of Applicant’s Arguments Submitted January 21, 2003**

##### **A. “Cost” Reason for not modifying Lindsay**

In the paragraph bridging pages 2 and 3 of the final office action, The Examiner sets forth his basis for rejecting the Applicant’s arguments and the Declaration of Uzi Gati, that modifying Lindsay’s insert to reverse the keyway and pin would result in a cutting insert that is more costly to manufacture. Specifically, the Examiner stated that:

“These arguments are unconvincing because the applicant has provided no support for the assertion that that proposed modification would be more costly in term of the cost of the insert. Similarly, the Declaration pointed to by the applicant merely asserts that there would be greater cost without explaining precisely why. Moreover, it would appear that even if the modified insert were shown to be most costly, any increased cost would be offset by a decreased cost for holder 12, since the hole and pin would be made therein.” (emphasis added)

It is unclear what type of “support” or “explaining” the Examiner seeks. The Examiner has apparently overlooked the obvious fact that *one manufactures far more inserts than holders*. This is because the life of a cutting insert (whose cutting edges become worn with use) is far, far

shorter than that of a holder (which will be used with a succession of cutting inserts). Thus, the Examiner's suggested modification that the hole be formed in each of Lindsay's cutting inserts (instead of in the holder) followed by insertion of the pin, would indeed result in greater total manufacturing costs<sup>1</sup>. In the event of an advisory action, the Examiner is kindly asked to explain why the foregoing is an unconvincing explanation of the "cost" reason for not modifying the Lindsay insert.

### **B. "Other" modifications to Lindsay**

On page 3 of the final office action, the Examiner further argues:

Additionally, the argument that the proposed modification to Lindsay would require forming a hole in cutting insert 32, etc., is another assumption made by the applicant that is unsupported by fact. It is believed that one having ordinary skill in the art is quite capable of forming a pin or protrusion by methods other than that shown for the holder 12 of Lindsay. The rejection for obviousness only indicates that the insert can have the pin, and correspondingly, the appropriate surface of the holder have the keyway. Under relevant law, the artisan does have to blindly follow every teaching in the base reference in order to make a specific modification to the reference. (Emphasis added).

With this, the Examiner suggests not only a "simple reversing" of the keyway and the hole/pin arrangement of Lindsay (for which there is neither motivation nor teaching, but only an increase in cost) but further employing some "methods other than that shown (in) Lindsay." While it is not known exactly what the Examiner has in mind, the Examiner's own statement acknowledges that nothing in Lindsay leads to such a modification. And only by hindsight could one arrive at a modification of Lindsay that does not use the 'hole and pin' taught in Lindsay. It is therefore submitted that the Examiner has impermissibly used the present invention as a roadmap for arriving at this rejection. And while one skilled in the art may not have to "blindly follow every teaching" in the prior art, that prior art must give *some* suggestion of the modifications needed to arrive at the present invention – and Lindsay gives none at all, if one were to follow the

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<sup>1</sup> Even if the cost of providing the hole and pin for a single insert were the same as for a tool holder.

Examiner's suggestion. In the event of an advisory action, the Examiner is kindly asked to explain the exact nature of, and the motivation for invoking, these "other" methods, so that the Applicant can adequately respond to the Examiner's suggestion.

**Lindsay's teaching away from "Longitudinal Insertion"**

On page 3 of the final office action, the Examiner rejected Applicant's argument that Lindsay teaches away from permitting longitudinal movement of the insert relative to the insert holder. Specifically, the Examiner stated:

This second argument of the applicant is also unconvincing for the following reasons. The portions of Lindsay pointed to by the applicant do teach that Lindsay does not want the cutting insert to move longitudinally, but only in the sense that movement not occur during use of the tool. This is a far cry from teaching away from a specific direction of insertion of the insert into the tool. While the insert of Lindsay is inserted vertically into the tool because of the configuration disclosed, no portion of the Lindsay document requires insertion only in this fashion, as the applicant appears to suggest. Thus the examiner disagrees that the portions of Lindsay pointed to by applicant teach away from longitudinal insertion, merely because they teach away from longitudinal movement in use. It is noted that even the instant application does not teach longitudinal movement of the insert holder<sup>2</sup> during use of the tool. On the contrary, the insert holder is securely clamped as is conventional, after its insertion longitudinally into the tool. (emphasis added).

It is respectfully submitted that the Examiner missed the point of the "longitudinal movement" passages cited in the January 21, 2003 Amendment.

Longitudinal movement of a cutting insert relative to the tool holder, "during use of the tool", is not the point. Neither Lindsay's cutting insert, nor the claimed cutting insert move longitudinally relative to the tool holder, "during use". In general, any such movement of a

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<sup>2</sup> It is assumed that the Examiner meant "cutting insert" and not 'insert holder'.

cutting insert relative to a tool holder “during use” is undesirable, since precise location of a cutting edge is required during cutting operations.

The passages cited by the Applicant in the January 21, 2003 office action discuss preventing longitudinal movement in the context of locating the cutting insert relative to the tool holder, during assembly. In Lindsay’s first embodiment, cutting insert 32 is provided with

“a centrally disposed keyway 38 which extends fully across the face 40 of the insert. When the insert 32 is placed in the slot, the pin 26 engages the keyway 38 to locate the insert 32 longitudinally relative to the tool holder 12 and prevent longitudinal movement with respect thereto.” (col. 2, lines 58-63). (Emphasis added).

And in Lindsay’s second embodiment, cutting insert 76 is provided with

“a centrally disposed keyway 82 which extends fully across the face 84. The keyway is formed such that its length 86 is precisely equal to the length 88 of the lip 74. The keyway 82 has a dimension 90 in the transverse direction of the holder (depth) precisely equal to the dimension 92 (thickness) of the lip 74 in the transverse direction. See FIG. 6. Thus, when the insert 76 is placed in the slot 66, the lip 74 engages the keyway 82 longitudinally to locate the insert relative to the holder 62 and prevent longitudinal movement with respect thereto.” (col. 3, lines 36-46). (Emphasis added).

Thus, Lindsay discloses and claims a cutting insert having a vertically extending<sup>3</sup> keyway that prevents longitudinal movement of the cutting insert relative to the holder. More importantly, both of Lindsay’s embodiments disclose and claim holder features (the “key” in claim 4 and the “lip” in claim 1) that clearly *prevent longitudinal insertion* of the cutting insert into the holder. In view of the vertical keyways on Lindsay’s inserts, and the key and the lip on Lindsay’s tool holders, Applicant reiterates that Lindsay teaches away from cutting inserts provided with structures that allow for longitudinal insertion into, and removal from, a tool holder.

<sup>3</sup> Lindsay’s independent claims 1 and 4 both recite that the “centrally disposed keyway (extends) from the top to the bottom sides” of the cutting insert.

Furthermore, Applicant disagrees with the Examiner's assertion that "no portion of the Lindsay document requires insertion of an insert only in (a vertical) fashion." In Lindsay's first embodiment (see, e.g., Figs 1, 2, 4 & 5), pin 26 projects into the insert receiving slot, thereby necessitating insertion and removal of cutting insert 32 in a vertical direction, since it would be impractical to remove pin 26 each time one wished to exchange a cutting insert in the longitudinal direction. And in Lindsay's second embodiment, tool holder lip 74 (see, e.g., Lindsay's Figs. 3 & 6) is surrounded on three sides by insert 76, thereby requiring that insert 76 be inserted into and removed from the tool holder, in a vertical direction.

Finally, even if the Examiner remains unconvinced that Lindsay *requires* insertion of an insert only in a vertical direction, Lindsay clearly discloses nothing that *suggests* insertion and removal of a cutting insert in the longitudinal direction. Accordingly, the Examiner's putative suggestion that one skilled in the art would find it expedient to modify Lindsay's insert to permit longitudinal insert insertion and removal, can only come from hindsight, upon viewing the present invention.

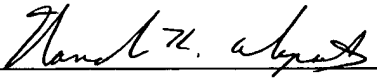
In view of all of the foregoing, it is submitted that one skilled in the art would not be motivated to modify Lindsay's cutting insert and tool holder, to arrive at the invention of the pending claims. Accordingly, the Examiner is urged to withdraw the rejection of record.

Reconsideration of the application is requested. Claims 2-7 and 9-34 are believed to be in allowable form and define over the prior art of record. An early notice of allowance is requested so that the application may proceed to issue.

No fee is believed to be due for this submission. Should a fee be required, the Commissioner is authorized to charge any such fee to Womble Carlyle's Deposit Account No. 09-0528.

Respectfully Submitted,

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